6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 82

[EPA-HQ-OAR-2011-0111; FRL-9729-5]

RIN- 2060-AQ84

Protection of Stratospheric Ozone: Listing of Substitutes for Ozone-Depleting Substances--Fire Suppression and Explosion Protection

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct Final Rule.

SUMMARY: EPA is taking direct final action to list substitutes for ozone-depleting substances (ODSs) in the fire suppression and explosion protection sector as acceptable subject to use restrictions under the EPA's Significant New Alternatives Policy program. This program implements Section 612 of the Clean Air Act, as amended in 1990, which requires EPA to evaluate substitutes for ozone-depleting substances and find them acceptable where they pose comparable or lower overall risk to human health and the environment than other available substitutes.

DATES: This rule is effective on **[insert date 90 days from date of publication in the Federal Register]** without further notice, unless EPA receives adverse comment or receives a request for a public hearing on or before **[insert date 30 days from date of publication in the Federal Register]**. If EPA receives adverse comment or receives a request for a public hearing, we will publish a timely withdrawal in the Federal Register informing the public that all or part of this rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-

2011-0111, by one of the following methods:

- Email: a-and-r-Docket@epa.gov
- Mail: OAR Docket and Information Center, U.S. Environmental Protection Agency, Mailcode 6102T, 1200 Pennsylvania Ave., N.W., Washington, DC 20460. To expedite review, a second copy of the comments should be sent to Bella Maranion at the address listed below under **FOR FURTHER INFORMATION CONTACT**.
- Hand Delivery: Air and Radiation Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA- HQ-OAR-2011-0111. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic

comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

Docket: All documents in the docket are listed on the www.regulations.gov web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically through www.regulations.gov or in hard copy at the Air and Radiation Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Bella Maranion, Stratospheric Protection Division, Office of Atmospheric Programs (6205J), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460; telephone number: (202) 343-9749; fax number: (202) 343-2363; e-mail address: maranion.bella@epa.gov.

SUPPLEMENTARY INFORMATION:

EPA is publishing this rule without a prior proposed rule because we view this as a non-controversial action and anticipate no adverse comment. However, in the "Proposed Rules" section of today's Federal Register, we are publishing a separate document that will serve as the proposed rule if adverse comments are received or a public hearing is requested on this direct final rule. We will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. For further information about commenting on this rule, see the ADDRESSES section of this document. If EPA receives adverse comment or a request for a public hearing, we will publish a timely withdrawal in the Federal Register informing the public that this direct final rule will not take effect. If a public hearing is requested, EPA will provide notice in the Federal Register as to the location, date, and time. We would address all public comments in a subsequent final rule based on the proposed rule.

The regulations implementing the Significant New Alternatives Policy (SNAP) program are codified at 40 CFR part 82, subpart G. The appendices to subpart G list substitutes for ozone-depleting substances (ODSs) for specific end uses as unacceptable or acceptable with certain restrictions imposed on their use. In addition, a list of acceptable substitutes without restrictions is available at http://www.epa.gov/ozone/snap/lists/index.html. The action in this direct final rule will add a total of three fire suppression agents to the SNAP list of acceptable substitutes in the appendices to subpart G: two fire suppression agents are added to the list of substitutes for halon 1301 that are acceptable subject to use conditions and one fire suppression agent is added to the list of substitutes for halon 1211 that are acceptable subject to narrowed use limits. This action does not place any significant burden on the

regulated community but lists as acceptable, subject to use restrictions, three new halon substitutes. The restrictions will ensure that these substitutes will not pose a greater risk to human health or the environment than other potentially available substitutes in the fire suppression end use.

This direct final rule regulates the use of Powdered Aerosol F (KSA®) and Powdered Aerosol G (Dry Sprinkler Powdered Aerosol (DSPA) Fixed Generators) by finding them acceptable subject to use conditions as substitutes for halon 1301 for use in total flooding fire suppression systems in normally unoccupied spaces. This action also finds C7 Fluoroketone acceptable subject to narrowed use limits as a substitute for halon 1211 for use as a streaming agent in portable fire extinguishers in nonresidential applications. Halons are chemicals that were once widely used in the fire protection sector but have been banned from production in the U.S. since 1994 because their emissions into the atmosphere are highly destructive to the stratospheric ozone layer. This action will provide users that need specialized fire protection applications with more alternatives to the use of halons. Businesses that may be regulated, either through manufacturing, distribution, installation and servicing, or use of the fire suppression equipment containing the substitutes are listed in the table below:

Table 1–Potentially Regulated Entities,

by North American Industrial Classification System (NAICS) Code

Category	NAICS code	Description of regulated entities
Construction	238210	Alarm system (e.g., fire, burglar), electric, installation only
Manufacturing	325998	Fire extinguisher chemical preparations manufacturing
Manufacturing	332919	Nozzles, fire fighting, manufacturing

Manufacturing	334290	Fire detection and alarm systems manufacturing
Manufacturing	336611	Shipbuilding and repairing
Manufacturing	339999	Fire extinguishers, portable, manufacturing
Manufacturing	336411	Aircraft manufacturing
Manufacturing	336413	Other aircraft parts and auxiliary equipment manufacturing

This table is not intended to be exhaustive, but rather a guide regarding entities likely to be regulated by this action. If you have any questions about whether this action applies to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

Table of Contents

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

B. Paperwork Reduction Act

C. Regulatory Flexibility Act

D. Unfunded Mandates Reform Act

E. Executive Order 13132:Federalism

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use

I. National Technology Transfer and Advancement Act

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

K. Congressional Review Act

I. Section 612 Program

A. Statutory Requirements

Section 612 of the Clean Air Act (CAA) requires EPA to develop a program for evaluating alternatives to ozone-depleting substances. EPA refers to this program as the Significant New Alternatives Policy (SNAP) program. The major provisions of Section 612 are:

- *Rulemaking* - Section 612(c) requires EPA to promulgate rules making it unlawful to replace any class I (chlorofluorocarbon, halon, carbon tetrachloride, methyl chloroform, and hydrobromofluorocarbon) or class II (hydrochlorofluorocarbon) substance with any substitute that the Administrator determines may present adverse effects to human health or the environment where the Administrator has identified an alternative that (1) reduces the overall risk to human health and the environment, and (2) is currently or potentially available.
- *Listing of Unacceptable/Acceptable Substitutes* - Section 612(c) also requires EPA to publish a list of the substitutes unacceptable for specific uses and to publish a corresponding list of acceptable alternatives for specific uses. The list of acceptable substitutes is found at http://www.epa.gov/ozone/snap/lists/index.html, and the lists of "unacceptable," "acceptable subject to use conditions," and "acceptable subject to narrowed use limits" substitutes are found in the appendices to subpart G of 40 CFR part 82.
- *Petition Process* - Section 612(d) grant the right to any person to petition EPA to add a substitute to, or delete a substitute from, the lists published in accordance with Section 612(c). The Agency has 90 days to grant or deny a petition. Where the Agency grants the petition, EPA must publish the revised lists within an additional six months.
- *90-day Notification* - Section 612(e) directs EPA to require any person who produces a chemical substitute for a class I substance to notify the Agency not less than 90 days before new or existing chemicals are introduced into interstate commerce for significant new uses as substitutes for a class I substance. The

producer must also provide the Agency with the producer's unpublished health and safety studies on such substitutes.

- *Outreach* - Section 612(b)(1) states that the Administrator shall seek to maximize the use of federal research facilities and resources to assist users of class I and II substances in identifying and developing alternatives to the use of such substances in key commercial applications.
- *Clearinghouse* - Section 612(b)(4) requires the Agency to set up a public clearinghouse of alternative chemicals, product substitutes, and alternative manufacturing processes that are available for products and manufacturing processes which use class I and II substances.

B. Regulatory History

On March 18, 1994, EPA published the original rulemaking (59 FR 13044) which established the process for administering the SNAP program and issued EPA's first lists identifying acceptable and unacceptable substitutes in the major industrial use sectors (subpart G of 40 CFR part 82). These sectors include: refrigeration and air-conditioning; foam blowing; solvents cleaning; fire suppression and explosion protection; sterilants; aerosols; adhesives, coatings and inks; and tobacco expansion. These sectors comprise the principal industrial sectors that historically consumed the largest volumes of ODS.

Section 612 of the CAA requires EPA to list as acceptable those substitutes that do not present a significantly greater risk to human health and the environment as compared with other substitutes that are currently or potentially available.

Under the SNAP regulations, anyone who plans to market or produce a substitute to replace a class I substance or class II substance in one of the eight major

industrial use sectors must provide notice to the Agency, including health and safety information on the substitute at least 90 days before introducing it into interstate commerce for significant new use as an alternative. 40 CFR 82.176(a). This requirement applies to the persons planning to introduce the substitute into interstate commerce,[1] which typically are chemical manufacturers but may include importers, formulators, or end-users when they are responsible for introducing a substitute into commerce.[2] The 90-day SNAP review process begins once EPA receives the submission and determines that the submission includes complete and adequate data (40 CFR 82.180(a)). As required by the CAA, the SNAP regulations, 40 CFR 82.174(a), prohibit the introduction of a substitute into interstate commerce earlier than 90 days after notice has been provided to the Agency.

The Agency has identified four possible decision categories for substitutes that are submitted for evaluation: acceptable; acceptable subject to use conditions; acceptable subject to narrowed use limits; and unacceptable[3] (40 CFR 82.180(b)). Use conditions and narrowed use limits are both considered "use restrictions" and are explained below. Substitutes that are deemed acceptable with no use restrictions (no use conditions or narrowed use limits) can be used for all applications within the relevant end-uses within

[1] As defined at 40 CFR 82.104, "interstate commerce" means the distribution or transportation of any product between one state, territory, possession or the District of Columbia, and another state, territory, possession or the District of Columbia, or the sale, use or manufacture of any product in more than one state, territory, possession or District of Columbia. The entry points for which a product is introduced into interstate commerce are the release of a product from the facility in which the product was manufactured, the entry into a warehouse from which the domestic manufacturer releases the product for sale or distribution, and at the site of United States Customs clearance.

[2] As defined at 40 CFR 82.172, "end-use" means processes or classes of specific applications within major industrial sectors where a substitute is used to replace an ODS.

[3] The SNAP regulations also include "pending," referring to submissions for which EPA has not reached a determination, under this provision.

the sector. Substitutes that are acceptable subject to use restrictions may be used only in accordance with those restrictions.

After reviewing a substitute, the Agency may determine that a substitute is acceptable only if certain conditions in the way that the substitute is used are met to minimize risks to human health and the environment. EPA describes such substitutes as "acceptable subject to use conditions." Entities that use these substitutes without meeting the associated use conditions are in violation of EPA's SNAP regulations. 40 CFR 82.174(c).

For some substitutes, the Agency may permit a narrow range of use within an end-use or sector. For example, the Agency may limit the use of a substitute to certain end-uses or specific applications within an industry sector. EPA describes these substitutes as "acceptable subject to narrowed use limits." A person using a substitute that is acceptable subject to narrowed use limits in applications and end-uses that are not consistent with the narrowed use limit is using the substitute in an unacceptable manner and is in violation of section 612 of the CAA and EPA's SNAP regulations. 40 CFR 82.174(c).

The Agency publishes its SNAP program decisions in the Federal Register (FR). EPA first publishes decisions concerning substitutes that are deemed acceptable subject to use restrictions (use conditions and/or narrowed use limits), or substitutes deemed unacceptable, as proposed rulemakings to allow the public opportunity to comment, before publishing final decisions.

In contrast, EPA publishes decisions concerning substitutes that are deemed acceptable with no restrictions in "notices of acceptability," rather than as proposed and

final rules. As described in the preamble to the rule initially implementing the SNAP program (59 FR 13044; March 18, 1994), EPA does not believe that rulemaking procedures are necessary to list alternatives that are acceptable without restrictions because such listings neither impose any sanction nor prevent anyone from using a substitute.

Many SNAP listings include "Comments" or "Further Information" to provide additional information on substitutes. Since this additional information is not part of the regulatory decision, these statements are not binding for use of the substitute under the SNAP program. However, regulatory requirements so listed are binding under other regulatory programs (e.g., worker protection regulations promulgated by the U.S. Occupational Safety and Health Administration (OSHA)). The "Further Information" classification does not necessarily include all other legal obligations pertaining to the use of the substitute. While the items listed are not legally binding under the SNAP program, EPA encourages users of substitutes to apply all statements in the "Further Information" column in their use of the substitute. In many instances, the information simply refers to sound operating practices that have already been identified in existing industry and/or building codes and standards. Thus, many of the comments, if adopted, would not require the affected user to make significant changes in existing operating practices.

For copies of the comprehensive SNAP lists of substitutes or additional information on SNAP, refer to EPA's Ozone Layer Protection website at www.epa.gov/ozone/snap/index.html. For more information on the Agency's process for administering the SNAP program or criteria for evaluation of substitutes, refer to the March 18, 1994, SNAP final rulemaking (59 FR 13044), codified at 40 CFR part 82,

subpart G. A complete chronology of SNAP decisions and the appropriate citations are found at http://www.epa.gov/ozone/snap/chron.html.

II. Listing Decision: Fire Suppression and Explosion Protection

A. Total Flooding: Powdered Aerosol F (KSA®) – Acceptable Subject to Use Conditions

EPA's Decision: EPA finds Powdered Aerosol F acceptable subject to use conditions as a substitute for halon 1301 for use in total flooding fire suppression systems in normally unoccupied spaces.

Powdered Aerosol F is acceptable, subject to use conditions, as a halon 1301 substitute for total flooding uses. As requested by the submitter, the use condition requires that Powdered Aerosol F be used only in areas that are not normally occupied. Powdered Aerosol F is used as a fire suppression agent in an aerosol fire-extinguishing system. It may be marketed under the name KSA®.

The submitter has claimed the composition of Powdered Aerosol F as confidential business information (CBI). You may find the submission under docket EPA-HQ-OAR-2011-0111 at *http://www.regulations.gov*.

Environmental information: EPA has reviewed the potential environmental impacts of this substitute. The active ingredients for this technology are solids before and fine solid particulates after use; therefore, the ozone depletion potential (ODP), global warming potential (GWP), and atmospheric lifetime (ALT) are zero. Thus, Powdered Aerosol F is not expected to pose any significant adverse impacts on the ozone layer or climate.

All manufacturing occurs in a facility with strict controls on all raw materials and processes, so minimal release to the ambient air is expected during the manufacturing process. Because installation and servicing occur at very large sites, releases in such locations are expected to be well below the acceptable exposure limits. In the event of a fire, Powdered Aerosol F is dispersed as fine solid particulates, reacting to the heat to suppress the fire. The constituents of Powdered Aerosol F are not volatile organic compounds (VOCs). If all spilled and settled material in the manufacturing facility and all on-site (installation, servicing, and system discharge) releases are cleaned up and disposed of according to federal, state, and local requirements, consistent with the material safety data sheet (MSDS), no release to the environment is expected.

Toxicity and exposure data: EPA evaluated occupational and general population exposure at manufacture and at end use to ensure that the use of Powdered Aerosol F will not pose unacceptable risks to workers or the general public. This risk screen is available in docket EPA-HQ-OAR-2011-0111 under the name, "Risk Screen on Substitute for Halon 1301 Total Flooding Systems in Unoccupied Spaces Substitute: Powdered Aerosol F (KSA®)." In particular, the risk screen considered the highly respirable nature of the substitute as well as the potential effect of increased blood pH from inhalation of the substitute. As discussed below, the use of proper personal protective equipment (PPE) during manufacturing, at installation, maintenance, and clean-up minimizes personnel exposure from inhalation of the substitute. Blood pH modeling also indicates that the levels of the constituent in Powdered Aerosol F affecting blood pH are not expected to pose a health risk. Based on this evaluation, EPA recommends the following

specifications for filling containers or installing total flooding fire suppression systems with this agent:

- Appropriate protective clothing (e.g., goggles, particulate removing respirators, and gloves) should be worn during the manufacture, clean up, and disposal of this agent.
- Appropriate protective clothing (e.g., goggles, particulate removing respirators, and gloves) should be worn during the installation and maintenance of the extinguishing units filled with the agent.
- Training for safe handling procedures should be provided to all employees that would be likely to handle the containers of the agent or extinguishing units filled with the agent. Use of this agent should be in accordance with the safety guidelines in the latest edition of the National Fire Protection Association (NFPA) 2010 Standard for Aerosol Extinguishing Systems.

The post activation product of Powdered Aerosol F is entirely particulates, and as indicated by the submitter, of a fine size which makes it highly respirable. A constituent of Powdered Aerosol F, despite having low toxicity, can pose a human health risk because it can raise blood pH level if inhaled in sufficient quantities. The potential to increase blood pH is not considered a significant adverse health effect because the body can restore the pH to normal range. Using information provided by the submitter, we modeled a reasonable worst-case accidental release (without a fire), exposing maintenance personnel to the maximum design concentration provided by the submitter. Blood pH modeling indicates that Powdered Aerosol F is not expected to pose a significant health risk. This calculation and the assumptions for respirable amounts and

releases of Powdered Aerosol F are included in the risk screen conducted for this substitute and are available in the docket for this rule. While the levels of soluble particles of Powdered Aerosol F are not expected to pose a significant health risk, EPA recommends the following:

- releases in all settings should be limited to an appropriate design concentration for the protected space so that increased pH level would not adversely affect exposed individuals; exposed individuals should be given an electrolyte solution to drink afterwards to restore the pH within the appropriate range;
- users should provide special training to individuals required to be in environments protected by Powdered Aerosol F extinguishing systems; each container of the Powdered Aerosol F should be clearly labeled with the potential hazards from use and safe handling procedures; and
- in the case of an accidental spill, the area should be well-ventilated, and workers should wear protective equipment while following good industrial hygiene practices for clean-up and disposal.

The MSDS contains similar requirements with regard to safe handling, protection from, and clean-up of Powdered Aerosol F.

Use of Powdered Aerosol F should conform to relevant Occupational Safety and Health Administration (OSHA) requirements, including 29 CFR Part 1910, Subpart L, Sections 1910.160 and 1910.162. Per OSHA requirements, protective gear (self-contained breathing apparatus) should be available in the event that personnel re-enter the area after Powdered Aerosol F has been discharged.

Comparison to other fire suppressants: According to the submitter, the active ingredients for Powdered Aerosol F are solids before and fine solid particulates after use. The post-activation products of Powdered Aerosol F have an ODP and a GWP of zero, which is comparable to or less than that for other non-ozone depleting substitutes for halon 1301, such as Inert Gas 100, HFC-227ea or HFC-125, with GWPs of zero, 3220, and 3500, respectively.[4] Toxicity risks are low as discussed above. We find that Powdered Aerosol F is acceptable for use in normally unoccupied spaces because it poses comparable or lower overall risk to public health and the environment than the other available substitutes for the same end use.

B. Total Flooding: Powdered Aerosol G (Dry Sprinkler Powdered Aerosol (DSPA) Fixed Generators) – Acceptable Subject to Use Conditions

EPA's decision: EPA finds Powdered Aerosol G (DSPA Fixed Generators) acceptable as a substitute for halon 1301 for total flooding uses in normally unoccupied spaces.

Powdered Aerosol G is acceptable, subject to use conditions, as a halon 1301 substitute for total flooding uses. As requested by the submitter, the use condition requires that Powdered Aerosol G be used only in areas that are normally unoccupied. Powdered Aerosol G is a solid material in pellet form, which aerosolizes upon activation, and housed in various-sized generator units. Depending on the fire suppression requirement, a single generator or several generators may be used in the protected space.

[4] IPCC, 2007: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. This document is accessible at *http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html*

When electrically or thermally activated, Powdered Aerosol G produces combustion by-products (micron-sized particles and a gaseous mixture of primarily nitrogen (N_2, CAS Reg. No. 7727-37-9)) that mix together into a uniform fire extinguishing aerosol before being released into the protected area. The released inert gases extinguish a fire in the space by displacing the oxygen available for combustion and reducing the heat of the combustion source. The submitter has claimed the composition of Powdered Aerosol G as CBI. You may find the submission under docket EPA-HQ-OAR-2011-0111 at *http://www.regulations.gov*.

Environmental information: The pre-activation constituents of Powdered Aerosol G are solids before use and therefore have zero ODP and zero GWP. Further, the ODP of each of the post-activation constituents of Powdered Aerosol G is zero, and the GWPs of post-activation constituents are 1 or less.

Of the organic constituents of Powdered Aerosol G, only hydrogen cyanide (a post-activation product) has not been exempted as a VOC as defined under CAA regulations (40 CFR 51.100(s)); however, it constitutes approximately $5x10^{-3}$ percent of the post-activation products by weight which is a very small amount. VOC emissions from the production of the generators containing Powdered Aerosol G are controlled through standard industry practices, and as such, VOC emissions from manufacture are expected to be minimal. Potential emissions of VOCs from the use of Powdered Aerosol G in the fire extinguishing and explosion prevention sector are likely to be insignificant relative to VOCs from all other sources (i.e., other industries, mobile sources, and biogenic sources). An assessment was performed to compare the annual VOC emissions from use of Powdered Aerosol G in total flooding systems produced in one year to other

anthropogenic sources of VOC emissions. This assessment is available in docket EPA-HQ-OAR-2011-0111 under the name, "Risk Screen on Substitute for Halon 1301 Total Flooding Systems in Unoccupied Spaces, Substitute: Powdered Aerosol G (Dry Sprinkler Powdered Aerosol (DSPA) Fixed Generators)." Assuming that 100 percent of Powdered Aerosol G produced in one year[5] were to be used in fire occurrences and thus released to the atmosphere (extremely unlikely), only 0.04 metric tonnes of VOCs would be emitted, which is approximately equal to $8.6x10^{-6}$ percent of the annual VOC emissions caused by fires,[6] or only about $1.5x10^{-6}$ percent of annual VOC emissions caused by highway vehicles.[7] This assessment finds that even at an unlikely release rate of 100 percent, the VOC emissions from use of Powdered Aerosol G are several orders of magnitude lower than other anthropogenic emissions; therefore, the environmental impacts of these VOCs are not considered a significant risk to local air quality.

Toxicity and exposure data: EPA evaluated occupational and general population exposure at manufacture and at end use to ensure that the use of Powdered Aerosol G will not pose unacceptable risks to workers or the general public. This risk screen is available in docket EPA-HQ-OAR-2011-0111 under the name, "Risk Screen on Substitute for Halon 1301 Total Flooding Systems in Unoccupied Spaces, Substitute: Powdered Aerosol G (Dry Sprinkler Powdered Aerosol (DSPA) Fixed Generators)."

Exposure to the DSPA generator upon activation may result in irritation if inhalation, ingestion, skin contact, or eye contact occurs. Exposure to an aerosol suppression agent may cause temporary, mild irritation of mucous membranes if inhaled

[5] Maximum total production per year at market saturation figure is based on DSPA SNAP submission.
[6] Based on 2010 projections calculated using 2008 EPA annual VOC emissions data for residential wood burning and agricultural field burning (EPA 2008 and EPA 2011) and ICF assumptions.
[7] Based on 2010 projections calculated using 2008 EPA annual VOC emissions data (EPA 2009) and ICF assumptions.

and may cause slight irritation of the skin. In the event of an accidental discharge, the room should be immediately evacuated and the instructions listed in the MSDS for Powdered Aerosol G should be followed. Workers should not enter the space following discharge until all particles have settled and/or been ventilated and the gases released by the system have dissipated.

EPA finds that the use of the exposure controls discussed in the following sections and adherence with the appropriate occupational safety guidelines and requirements in the manufacturer's MSDS are sufficient to ensure that the manufacture, installation, maintenance, and cleanup of Powdered Aerosol G do not pose a risk to human health. Likewise, no consumer exposure is expected because Powdered Aerosol G systems are designed for use in commercial and industrial applications only in normally unoccupied spaces.

Powdered Aerosol G is not expected to pose a risk to workers during manufacture due to an automated production process. The only place where workers may be exposed to the constituents is during the loading of the processing vessel/mixer, which accounts for less than 10 minutes of the production time. According to the submitter, these workers wear PPE including protective suits, safety glasses, and respirators. The entire manufacturing space is ventilated with a local exhaust system to reduce airborne exposure of the Powdered Aerosol G constituents. The submitter reported to EPA that manufacture of Powdered Aerosol G pellets and generators does not take place in the United States. Only the final product, the Powdered Aerosol G generator unit, consisting of the rigid steel case containing solid blocks of the Powdered Aerosol G extinguishing compound is sold in the United States. In the "Further Information" columns of the tables

summarizing today's listing decisions, EPA recommends the following for establishments filling, installing, or servicing generator units or systems to be used in total flooding applications:

- appropriate protective clothing (e.g., goggles, particulate removing respirators, and gloves) should be worn during the manufacture, clean up, and disposal of this agent as well as during the installation and maintenance of the generator units filled with the agent;
- training for safe handling procedures should be provided to all employees that would be likely to handle the agent or the generator units containing the agent; and
- use of this agent should be in accordance with the safety guidelines in the latest edition of the National Fire Protection Association (NFPA) 2010 Standard for Aerosol Extinguishing Systems.

Powdered Aerosol G generators are not expected to pose a risk to workers during installation, maintenance, and cleanup. In accordance with Department of Health and Human Services regulations (42 CFR part 84), safety glasses and a NIOSH/CDC-approved N99 respirator are required for individuals installing Powdered Aerosol G fixed systems. In the event of an accidental discharge, the manufacturer's MSDS should be followed, including the use of a NIOSH N99 respirator and goggles. For cleanup operations, workers should not enter the space after discharge until all particles have settled and/or been ventilated and the gases released by the system have dissipated. Workers entering the space before it has been ventilated should wear protective clothing,

goggles, and a self-contained breathing apparatus (SCBA). In accordance with the MSDS, EPA recommends the following:

- the post-activation products of Powdered Aerosol G should be collected by hand (e.g., with a dustpan and duster or a vacuum cleaner);
- waste should be collected in suitable drums for disposal and the area should be washed clean with sufficient quantities of water;
- employers should provide special training to workers required to clean up after discharge or required to work near spaces protected by Powdered Aerosol G fixed generator total flooding systems;
- each Powdered Aerosol G generator unit should be clearly labeled with the potential hazards of use and with safe handling procedures; and
- in the case of an accidental discharge, the area should be well-ventilated, and workers should wear protective equipment while following good industrial hygiene practices for clean-up and disposal.

Use of Powdered Aerosol G generators should conform to relevant OSHA requirements, including 29 CFR part 1910, subpart L, sections 1910.160 and 1910.162. Per OSHA requirements, protective gear (self-contained breathing apparatus) should be available in the event that personnel re-enter the area before the particles have settled (approximately 30-40 minutes after discharge) or before the space has been ventilated.

Comparison to other fire suppressants: The post-activation products of Powdered Aerosol G have ODPs of zero and GWPs of 1 or less, comparable to or less than that for other non-ozone depleting substitutes for halon 1301, such as Inert Gas 100, HFC-227ea

or HFC-125, with GWPs of zero, 3220, and 3500, respectively.[8] Toxicity risks are low when used in normally unoccupied areas for commercial and industrial specialty fire protection applications. We find that Powdered Aerosol G is acceptable for use in normally unoccupied areas because it poses comparable or lower overall risk to public health and the environment than the other substitutes acceptable in the end use listed above when used in accordance with the use condition.

C. Streaming: C7 Fluoroketone – Acceptable Subject to Narrowed Use Limits

EPA's decision: EPA finds C7 Fluoroketone is acceptable subject to narrowed use limits as a substitute for halon 1211 for use as a streaming agent. The narrowed use limits require that C7 Fluoroketone be used only in nonresidential applications.

C7 Fluoroketone is also known as C7 FK or FK-6-1-14. This substitute is a blend of two isomers, 3-pentanone,1,1,1,2,4,5,5,5-octafluoro-2,4-bis(trifluoromethyl) (Chemical Abstracts Service Registry Number [CAS Reg. No.] 813-44-5) and 3-hexanone,1,1,1,2,4,4,5,5,6,6,6-undecafluoro-2-(trifluoromethyl) (CAS Reg. No. 813-45-6). You may find the submission under docket EPA-HQ-OAR-2011-0111 at http://www.regulations.gov.

Environmental information: C7 Fluoroketone has zero ODP and a GWP of approximately 1. Therefore, C7 Fluoroketone is not expected to pose any significant adverse impact on the ozone layer or climate.

The physicochemical properties of the majority of halon substitutes make it unlikely that the substitutes would be released to surface water as a result of use. In the case of C7 Fluoroketone, the proposed substitute is insoluble in water and readily

[8] IPCC, 2007.

volatilizes. Thus, EPA expects that all of the constituents would rapidly vaporize during expulsion from the container, would not be likely to settle, and therefore would be unlikely to lead to surface water contamination or generation of solid waste.

C7 Fluoroketone has not been exempted as a VOC under the CAA (40 CFR 51.100(s)). VOC emissions from the production of portable extinguishers charged with C7 Fluoroketone are controlled through standard industry practices, and as such, emissions from manufacture of units are likely to be minimal. An assessment was performed to compare the annual VOC emissions from use of C7 Fluoroketone in portable extinguishers in one year to other anthropogenic sources of VOC emissions. This assessment is available in docket EPA-HQ-OAR-2011-0111 under the name, "Risk Screen on Substitute for Halon 1211 as a Streaming Agent in Portable Fire Extinguishers Substitute: C7 Fluoroketone." This assessment finds that even if the entire portion for streaming agent applications of the allowable quantity of C7 FK produced by the submitter in one year was all released to the atmosphere (extremely unlikely), the resulting VOC emissions would be approximately equal to $3.0x10^{-2}$ percent of annual VOC emissions caused by fires,[9] or only about $1.1x10^{-3}$ percent of all annual anthropogenic VOC emissions.[10] As these emissions are several orders of magnitude less than other anthropogenic emissions, the environmental impacts of these VOCs are not considered a significant risk to local air quality.

Toxicity and exposure data: Inhalation of C7 Fluoroketone could cause respiratory tract irritation and symptoms may include cough, sneezing, nasal discharge,

[9] Based on 2010 projections calculated using 2008 EPA annual VOC emissions data for residential wood burning and agricultural field burning (EPA 2008 and EPA 2011) and ICF assumptions.
[10] Based on 2010 projections calculated using 2008 EPA annual VOC emissions data (EPA 2009) and ICF assumptions.

headache, hoarseness, and nose and throat pain. Contact with the eyes and/or skin during product use is not expected to result in significant irritation. Ingestion of C7 Fluoroketone is not expected to cause health effects, and there is no anticipated need for first aid if C7 Fluoroketone is ingested. The potential health effects of C7 Fluoroketone can be minimized by following the exposure guidelines and recommendations for ventilation and PPE outlined in the MSDS and discussed further below.

EPA evaluated occupational and general population exposure at manufacture and at end use to ensure that the use of C7 Fluoroketone will not pose unacceptable risks to workers or the general public. This risk screen is available in docket EPA-HQ-OAR-2011-0111 under the name, "Risk Screen on Substitute for Halon 1211 as a Streaming Agent in Portable Fire Extinguishers Substitute: C7 Fluoroketone."

EPA is providing the following additional information regarding use of C7 Fluoroketone as a streaming agent in nonresidential applications. Appropriate protective measures should be taken and proper training administered for the manufacture, clean-up and disposal of this product. For this new chemical, the manufacturer developed an acceptable exposure limit (AEL) for the workplace set at a level believed to protect from chronic adverse health effects those workers who are regularly exposed, such as in the manufacturing or filling processes. EPA reviewed the submitter's supporting data and accepts the manufacturer's AEL for C7 Fluoroketone of 225 ppm over an 8-hour time-weighted average.[11] EPA recommends the following for establishments filling canisters to be used in streaming applications:

[11] "Determination of an AEL for C7 Fluoroketone (C7 FK)," Appendix A to Risk Screen on Substitute for Halon 1211 as a Streaming Agent in Portable Fire Extinguishers Substitute: C7 Fluoroketone. Available in docket EPA-HQ-OAR-2011-0111

- adequate ventilation should be in place;
- all spills should be cleaned up immediately in accordance with good industrial hygiene practices; and
- training for safe handling procedures should be provided to all employees that would be likely to handle the containers of the agent or extinguishing units filled with the agent.

EPA anticipates that C7 Fluoroketone will be used consistent with the recommendations specified in the manufacturer's MSDS.

EPA recommends use of C7 Fluoroketone as a streaming agent in accordance with the latest edition of NFPA Standard 10 for Portable Fire Extinguishers. We expect that users will be able to meet the recommended workplace exposure limit and address potential health risks by following the above recommendations, using the substitute in accordance with the manufacturer's MSDS, and following other safety precautions common to the fire protection industry.

Comparison to other fire suppressants: C7 Fluoroketone is not ozone-depleting with a GWP of 1 in contrast to halon 1211 (with an ODP of 7.1 and a GWP of 1890), the ODS which it replaces. Compared to other substitutes for halon 1211, such as HCFC Blend B (with ODP of roughly 0.01 and GWP of roughly 80), HFC-227ea (with ODP of 0 and GWP of 3220), and HFC-236fa (with an ODP of 0 and GWP of 9810), C7 Fluoroketone has a similar or less significant impact on the ozone layer and climate. Risk to the general population is expected to be negligible provided that the substitute is not used in residential applications as requested by the submitter and as established under the narrowed use limits. Occupational exposure should not pose a problem if use is in

accordance with the manufacturer's MSDS and other precautions normally used in the fire protection industry. Thus, we find that C7 Fluoroketone is acceptable subject to narrowed use limits because the overall environmental and human health risk posed by C7 Fluoroketone is lower than or comparable to the risks posed by other available substitutes in the same end use.

III. Statutory and Executive Order Reviews

A. *Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

OMB notified EPA on May 5, 2011, that it considers this action not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and it is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. *Paperwork Reduction Act*

This action does not impose any new information collection burden. This final rule is an Agency determination. It contains no new requirements for reporting. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations in subpart G of 40 CFR part 82 under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control numbers 2060-0226 (EPA ICR No. 1596.08). The OMB control numbers for EPA's regulations are listed in 40 CFR part 9.

C. *Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking

requirements under the Administrative Procedure Act or any other statutes unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impact of today's rule on small entities, small entities are defined as (1) a small business that produces or uses fire suppressants as total flooding and/or streaming agents with 500 or fewer employees or total annual receipts of $5 million or less; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities beyond current industry practices. Today's action effectively supports the introduction of three new alternatives to the market for fire protection extinguishing systems, thus providing additional options for users making the transition away from ozone-depleting halons.

Use of halon 1301 total flooding systems and halon 1211 streaming agents have historically been in specialty fire protection applications including essential electronics, civil aviation, military mobile weapon systems, oil and gas and other process industries, and merchant shipping with smaller segments of use including libraries, museums, and laboratories. The majority of halon system and equipment owners continue to maintain

and refurbish existing systems since halon supplies continue to be available in the U.S. Owners of new facilities make up the market for the new alternative agent systems and may also consider employing other available fire protection options including new, improved technology for early warning and smoke detection. Thus, EPA is providing more options to any entity, including small entities, by finding substitutes acceptable for use. The use restrictions imposed on the substitutes in today's rule are consistent with the applications suggested by the submitters and with current industry practices. Therefore, we conclude that the rule does not impose any new cost on businesses.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. By introducing three new substitutes, today's rule gives additional flexibility to small entities that are concerned with fire suppression. EPA also has worked closely together with the NFPA, which conducts regular outreach with small entities and involves small state, local, and tribal governments in developing and implementing relevant fire protection standards and codes.

D. *Unfunded Mandates Reform Act*

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandate Reform Act of 1995 (UMRA), 2 U.S.C. 1531-1538 for State, local, or tribal governments or the private sector. This action imposes no enforceable duty on any State, local, or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect

small governments. This direct final rule will provide additional options for fire protection subject to safety guidelines in industry standards. These standards are typically already required by state or local fire codes, so this action will not affect small governments.

E. *Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This regulation applies directly to facilities that use these substances and not to governmental entities. Thus, Executive Order 13132 does not apply to this action.

F. *Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. It does not significantly or uniquely affect the communities of Indian tribal governments, because this regulation applies directly to facilities that use these substances and not to governmental entities. Thus, Executive Order 13175 does not apply to this action.

G. *Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

This action is not subject to E.O. 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in E.O. 12866, and because the Agency does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are discussed in section II.

H. *Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use*

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. *National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking does not involve setting technical standards. EPA defers to existing NFPA voluntary consensus standards and Occupational Safety and Health Administration (OSHA) regulations that relate to the safe use of halon substitutes reviewed under SNAP. EPA refers users to the latest edition of NFPA 2010 Standard on Aerosol Extinguishing Systems which provides for safe use of aerosol extinguishing

agents and technologies and NFPA 10 Standard for Portable Fire Extinguishers. Copies of these standards may be obtained by calling the NFPA's telephone number for ordering publications at 1-800-344-3555. The NFPA 2010 standards meet the objectives of the rule by setting scientifically-based guidelines for safe exposure to halocarbon and inert gas agents and aerosol extinguishing agents, respectively. In addition, EPA has worked in consultation with OSHA to encourage development of technical standards to be adopted by voluntary consensus standards bodies.

J. *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population**.** This direct final rule would provide fire suppression substitutes that have no ODP and low or no GWP. The avoided ODS and GWP emissions would assist in restoring the stratospheric

ozone layer, avoiding adverse climate impacts, and result in human health and environmental benefits.

K. *Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective [**insert date 90 days after publication in the Federal Register**].

List of Subjects in 40 CFR Part 82

Environmental protection, Administrative practice and procedure, Air pollution control, Reporting and recordkeeping requirements, Stratospheric ozone layer.

Dated: September 11, 2012

Lisa P. Jackson,

Administrator.

For the reasons set out in the preamble, 40 CFR part 82 is amended as follows:

PART 82 - PROTECTION OF STRATOSPHERIC OZONE

1. The authority citation for part 82 continues to read as follows:

Authority: 42 U.S.C. 7414, 7601, 7671 - 7671q.

Subpart G - Significant New Alternatives Policy Program

2. Subpart G of part 82 is amended by adding Appendix S to read as follows:

Appendix S to Subpart G of Part 82- Substitutes Listed in the **[Insert date of publication in the Federal Register]** Final Rule, Effective **[Insert date 90 days after date of publication in the Federal Register]**.

FIRE SUPPRESSION AND EXPLOSION PROTECTION SECTOR--ACCEPTABLE SUBJECT TO USE CONDITIONS

End-Use	Substitute	Decision	Conditions	Further Information
Total Flooding	Powdered Aerosol F (KSA®) as a substitute for Halon 1301	Acceptable subject to use conditions	For use only in normally unoccupied areas	Use of this agent should be in accordance with the safety guidelines in the latest edition of the NFPA 2010 standard for Aerosol Extinguishing Systems. For establishments filling, installing, servicing, using, or disposing of containers or systems to be used in total flooding applications, EPA recommends the following: - appropriate protective clothing (e.g., goggles, particulate removing respirators, and gloves) should be worn during the installation and maintenance of the extinguishing units filled with the agent or during clean up and disposal of this agent; - training should be provided to all employees that would be likely to handle containers of the agent or extinguishing units filled with the agent,

				required to clean up after discharge or required to work near spaces protected by Powdered Aerosol F. Releases in all settings should be limited to an appropriate design concentration for the protected space so that increased blood pH level would not adversely affect exposed individuals. Exposed individuals should be given an electrolyte solution to drink afterwards to restore the pH within the appropriate range. Each extinguisher should be clearly labeled with the potential hazards from use and safe handling procedures. In the case of an accidental spill, the area should be well-ventilated, and workers should wear protective equipment while following good industrial hygiene practices for clean-up and disposal. See additional comments 1, 2, 3, 4.
Total Flooding	Powdered Aerosol G (Dry Sprinkler Powdered Aerosol (DSPA) Fixed Generators) as a substitute for Halon 1301	Acceptable subject to use conditions	For use only in normally unoccupied areas	Use of this agent should be in accordance with the safety guidelines in the latest edition of the NFPA 2010 standard for Aerosol Extinguishing Systems. For establishments filling, installing, servicing, using or disposing of generator units or systems in total flooding applications, EPA recommends the appropriate protective clothing (e.g., goggles, particulate removing respirators, and gloves) should be worn during the installation and maintenance of the extinguishing units filled with the agent or during clean up and disposal of this agent. Powdered Aerosol G should be collected by hand (e.g., with a dustpan and duster or a vacuum cleaner); waste

				should be collected in suitable drums for disposal and the area should be washed clean with sufficient quantities of water; and training should be provided to all employees that would be likely to handle the agent or generator units filled containing the agent, required to clean up after discharge or required to work near spaces protected by Powdered Aerosol G fixed generator total flooding systems. In accordance with Department of Health and Human Services regulations (42 CFR Part 84), safety glasses and a NIOSH/CDC-approved N99 respirator are required for individuals installing Powdered Aerosol G fixed systems. Each generator unit should be clearly labeled with the potential hazards from use and safe handling procedures. In the case of an accidental discharge, the area should be well-ventilated, and workers should wear protective equipment while following good industrial hygiene practices for clean-up and disposal. See additional comments 1, 2, 3, 4.

Additional comments:
1- Should conform to relevant OSHA requirements, including 29 CFR 1910, Subpart L, Sections 1910.160 and 1910.162.
2- Per OSHA requirements, protective gear (SCBA) should be available in the event personnel should reenter the area.
3- The agent should be recovered from the fire protection system in conjunction with testing or servicing, and recycled for later use or destroyed.
4- EPA has no intention of duplicating or displacing OSHA coverage related to the use of personal protective equipment (e.g., respiratory protection), fire protection, hazard communication, worker training or any other occupational safety and health standard with respect to halon substitutes.

FIRE SUPPRESSION AND EXPLOSION PROTECTION SECTOR--ACCEPTABLE SUBJECT TO NARROWED USE LIMITS

End-Use	Substitute	Decision	Conditions	Further Information
Streaming	C7 Fluoro-ketone as a substitute for Halon 1211	Acceptable subject to narrowed use limits.	For use only in non-residential applications	Use of this agent should be in accordance with the latest edition of NFPA Standard 10 for Portable Fire Extinguishers. For operations that fill canisters to be used in streaming applications, EPA recommends the following: —Adequate ventilation should be in place; —All spills should be cleaned up immediately in accordance with good industrial hygiene practices; and —Training for safe handling procedures should be provided to all employees that would be likely to handle containers of the agent or extinguishing units filled with the agent. See additional comments 1, 2, 3, 4.

Additional comments:
1- Should conform to relevant OSHA requirements, including 29 CFR 1910, Subpart L, Sections 1910.160 and 1910.162.
2- Per OSHA requirements, protective gear (SCBA) should be available in the event personnel should reenter the area.
3- The agent should be recovered from the fire protection system in conjunction with testing or servicing, and recycled for later use or destroyed.
4- EPA has no intention of duplicating or displacing OSHA coverage related to the use of personal protective equipment (e.g., respiratory protection), fire protection, hazard communication, worker training or any other occupational safety and health standard with respect to halon substitutes.

BILLING CODE 6560-50

[FR Doc. 2012-23138 Filed 09/18/2012 at 8:45 am; Publication Date: 09/19/2012]